

REMARKS

With this Response, claim 41 is amended. Applicants respectfully request that claims 1-40 be canceled without prejudice. Claims 42-65 are added herein. Therefore, claims 41-65 are pending.

OATH/DECLARATION

Applicants understand that a new declaration is required. A declaration will be filed with the signature of the second inventor.

CLAIM OBJECTIONS

Various objections were made to claims 1, 2, 7, 22, 35, 39, and 41. Claim 41 is amended herein, and appropriate correction to the missing article has been made. The remaining claims have been canceled, rendering objection to these claims moot.

CLAIM REJECTIONS - 35 U.S.C. § 112

Claims 1 and 41 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Applicants are unable to understand why this rejection of "a weak link component" from claims 1 was not made previously. Nevertheless, Applicants have canceled this claim, rendering rejection of this claim moot. As to the rejection of claim 41, although Applicants submit that the claim language was supported in the specification (see MPEP §§ 2173.01, 2111.01), Applicants have elected to amend the claim in an effort to expedite issuance of the claim. Therefore, Applicants respectfully submit that this rejection has been overcome, and requests the rejection be withdrawn.

Application No.: 09/817,731
Attorney Docket No.: 15685.P075

-9-

Examiner: D.B. Gandhi
Art Unit: 2133

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CLAIM REJECTIONS - 35 U.S.C. § 103

Claims 1, 16, 22, and 41 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,361,970 issued to Magnuski (*Magnuski*) in view of U.S. Patent No. 3,195,049 issued to Altman et al. (*Altman*). Claims 2 and 17-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Magnuski* and *Altman* in view of U.S. Patent Application Publication No. US 2002/0114288 of Soliman (*Soliman*). Claims 3 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Magnuski*, *Altman*, and *Soliman* in view of U.S. Patent No. 6,591,382 B1 issued to Molloy et al. (*Molloy*) and U.S. Patent No. 5,722,051 issued to Agrawal et al. (*Agrawal*). Claims 5-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Magnuski* and *Altman* in view of U.S. Patent No. 6,052,594 issued to Chuang et al. (*Chuang*) and U.S. Patent No. 6,170,075 B1 issued to Schuster et al. (*Schuster*). Claims 11 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Magnuski*, *Altman*, *Chuang*, and *Schuster*, and further in view of U.S. Patent No. 5,881,105 issued to Balachandran et al. (*Balachandran*). Claims 12 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Magnuski*, *Altman*, *Chuang*, *Schuster*, and *Balachandran* and further in view of U.S. Patent No. 6,694,155 B1 issued to Chin et al. (*Chin*). Claim 15 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Magnuski* and *Altman* in view of U.S. Patent No. 6,044,349 issued to Tolopka et al. (*Tolopka*). Claim 23 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Magnuski* and *Altman* in view of *Chin*. Claims 24-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Magnuski* and *Altman* in view of *Balachandran*. Claim 26 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Magnuski*, *Altman*, and *Balachandran* in view of *Schuster*. Claims 27-29 and 31-33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Magnuski*, *Altman*, *Balachandran*,

Application No.: 09/817,731
Attorney Docket No.: 15685.P075

-10-

Examiner: D.B. Gandhi
Art Unit: 2133

BEST AVAILABLE COPY

and *Schuster* in view of *Chuang*. Claim 30 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Magnuski*, *Altman*, *Balachandran*, *Schuster*, and *Chuang* in view of *Chin*. Claim 34 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Magnuski* and *Altman* in view of U.S. Patent No. 5,819,174 issued to Kyllonen (*Kyllonen*). Claims 1-40 are canceled herein, rendering rejection of these claims is moot. Applicants respectfully submit that claim 41 is not rendered obvious by the cited references for at least the following reasons.

Claim 41 recites:

determining that an effective signal strength of a signal on a wireless communication link using signal diversity in one or more of the space, time, or frequency domains is insufficient to provide a desired communication range;
introducing signal diversity in an additional of the space, time, or frequency domains into the wireless communication link to generate multiple decorrelated signals corresponding to the signal on the wireless communication link; and

selectively combining the decorrelated signals and demodulating the combined, decorrelated signals to generate a representation of the content of the signal.

The *Magnuski* and *Altman* references cited, as with the *Soliman* and *Naguib* ("Increasing Data Rate Over Wireless Channels," May 2000, IEEE Signal Processing Magazine, Volume: 17, Issue: 3, pages 76-92) references cited in the previous Office Action, discuss various types of signal diversity, and **fail to disclose or suggest** introducing additional diversity into a wireless communication link, as recited in claim 41. Furthermore, as is astutely suggested by the choice of the *Magnuski* and *Altman* references in the Office Action, diversity technology has been in existence for many decades, and yet no previous wireless communication system provides for dynamically introducing additional diversity in response to detecting degradation of a signal quality on a wireless communication link, as recited in the claimed invention. Applicants further submit that the remaining cited references likewise fail to disclose or suggest dynamically introducing additional diversity in response to detecting degradation of a signal quality on a

Application No.: 09/817,731
Attorney Docket No.: 15685.P075

-11-

Examiner: D.B. Gandhi
Art Unit: 2133

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wireless communication link, as recited in the claimed invention. Therefore, the cited references, whether alone or in combination, fail to disclose or suggest at least one element of the claimed invention, and so fail to render obvious the invention as recited in claim 41, as per MPEP § 2143.

NEW CLAIMS

New claim 42 recites the following:

providing a wireless communication link with a level of diversity;
detecting a degradation of signal quality on the wireless communication link; and

dynamically introducing additional diversity on the wireless communication link to result in the wireless communication link having diversity in two or more of the space, time, or frequency domains in response to detecting the degradation of signal quality, to generate a plurality of decorrelated signals to be selectively combined with at least the use of a weight vector and demodulated to provide a representation of an originally transmitted signal.

Claims 55 and 58 recite similar limitations directed to introduce additional diversity in a wireless communication link. As discussed above, Applicants respectfully submit that the cited references fail to disclose or suggest at least this element of the claims, and so fail to render obvious the claimed invention. Applicants thus submit that rejection of these claims under the cited references would be improper.

CONCLUSION

For at least the foregoing reasons, Applicants submit that the rejections have been overcome, placing all pending claims in condition for allowance. Such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application.

Application No.: 09/817,731
Attorney Docket No.: 15685.P075

-12-

Examiner: D.B. Gandhi
Art Unit: 2133

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Respectfully submitted,
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Application No.: 09/817,731
Attorney Docket No.: 15685.P075

-13-

Examiner: D.B. Gandhi
Art Unit: 2133

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